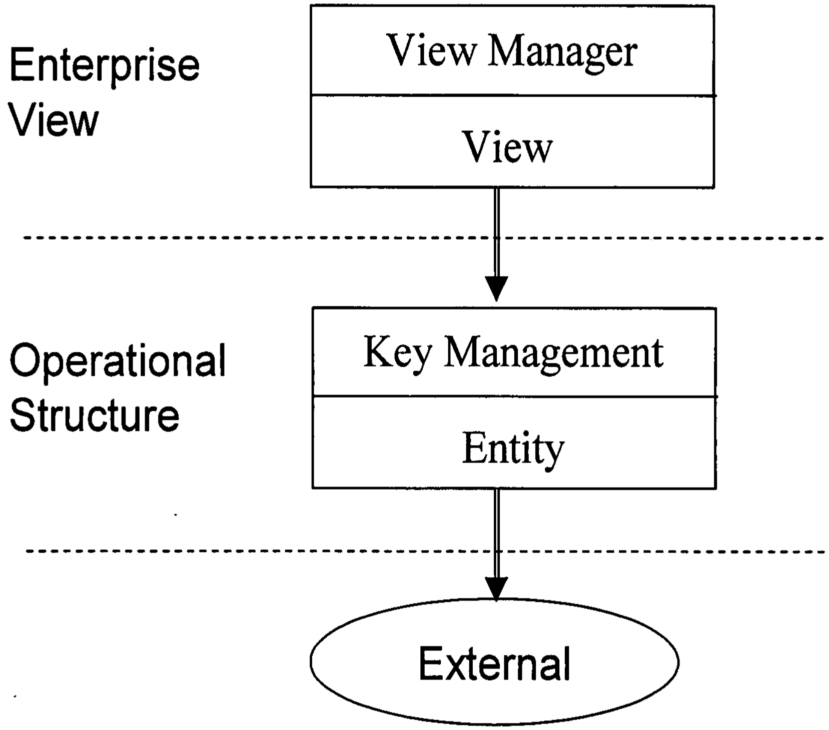
Enterprise View
View Manager
View
Operational Structure
Key Management
Entity
External

Fig. 1

Version	1.1
Serial Number	12345
Signature Algorithm	RSA+MD2, 1024
Issuer	C=US, S=NY, O=Xcorp
Validity	1/1/98 - 12/31/99
Subject	C=US,S=NY, O=Xcorp,CN=John
Subject Public Key Info	RSA, 1024, public key value
Other info.	Roles, policies, reliance limits, etc
Signature of CA	(based on all the above, public info and CA's private key

Fig. 2

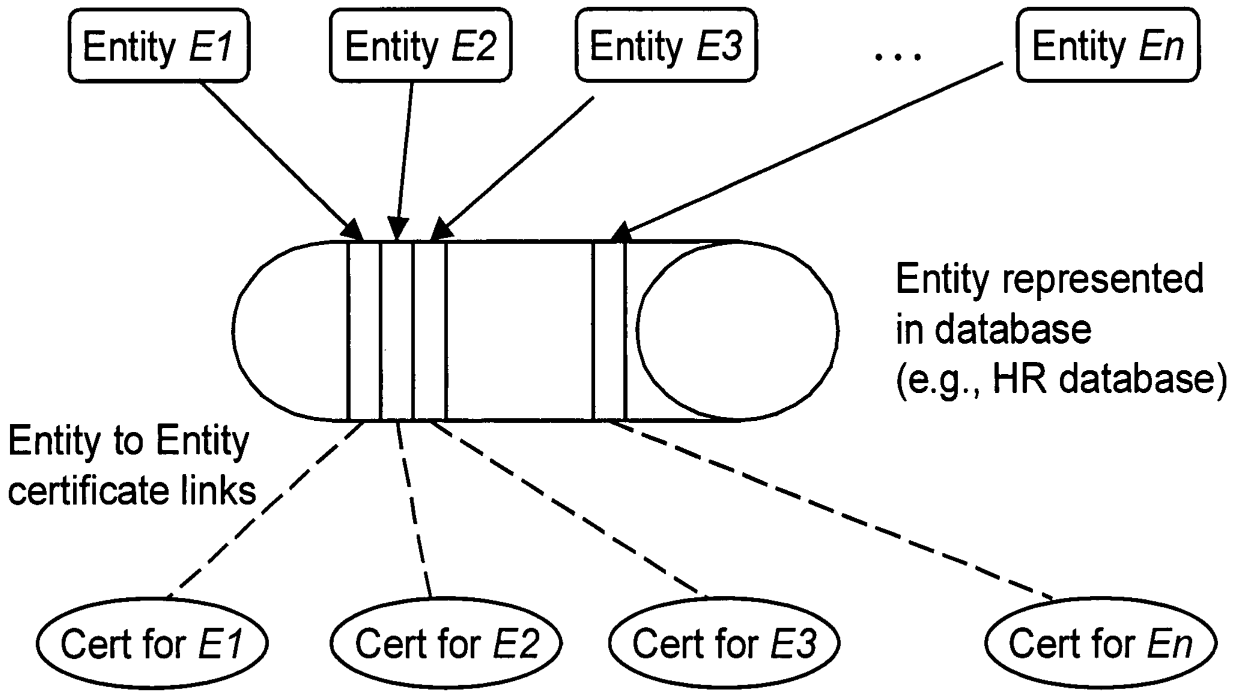Entity E1
Entity E2
Entity E3
...
Entity En
Entity represented in database (e.g., HR database)
Entity to Entity certificate links
Cert for E1
Cert for E2
Cert for E3
Cert for En

Fig. 3

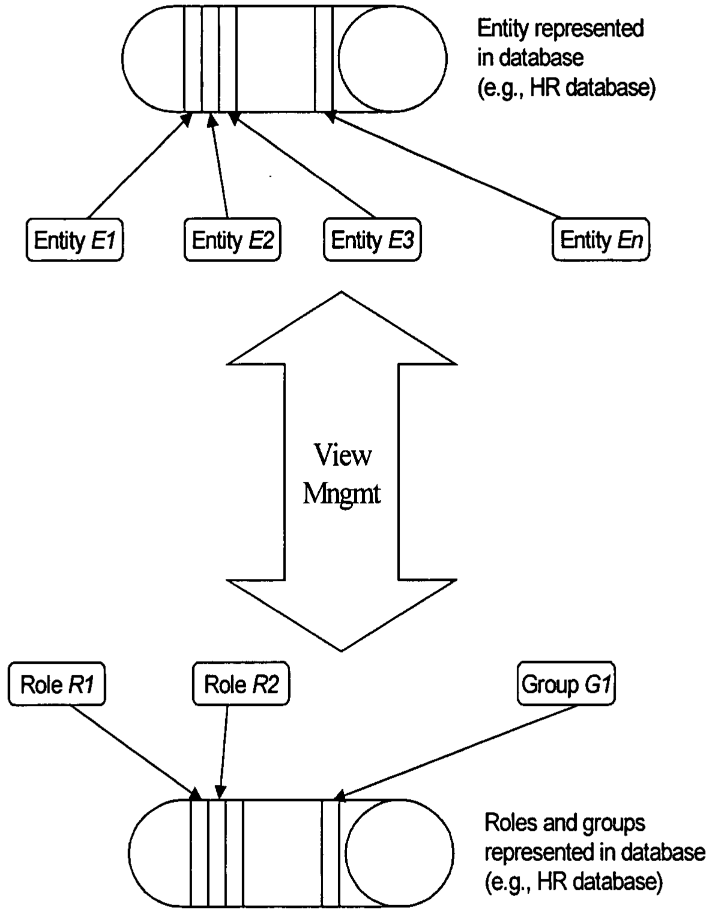
Entity represented
in database
(e.g., HR database)
Entity *E1*
Entity *E2*
Entity *E3*
Entity *En*
View
Mngmt
Role *R1*
Role *R2*
Group *G1*
Roles and groups
represented in database
(e.g., HR database)

Fig. 4

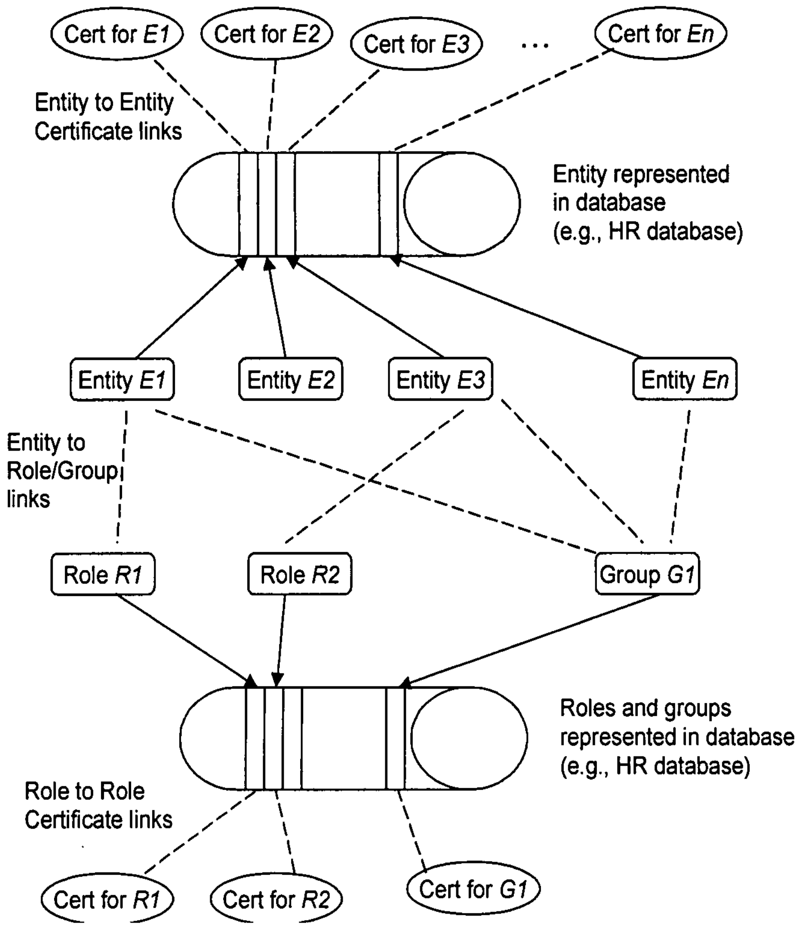
Cert for *E1*
Cert for *E2*
Cert for *E3*
...
Cert for *En*
Entity to Entity
Certificate links
Entity represented
in database
(e.g., HR database)
Entity *E1*
Entity *E2*
Entity *E3*
Entity *En*
Entity to
Role/Group
links
Role *R1*
Role *R2*
Group *G1*
Roles and groups
represented in database
(e.g., HR database)
Role to Role
Certificate links
Cert for *R1*
Cert for *R2*
Cert for *G1*

Fig. 5

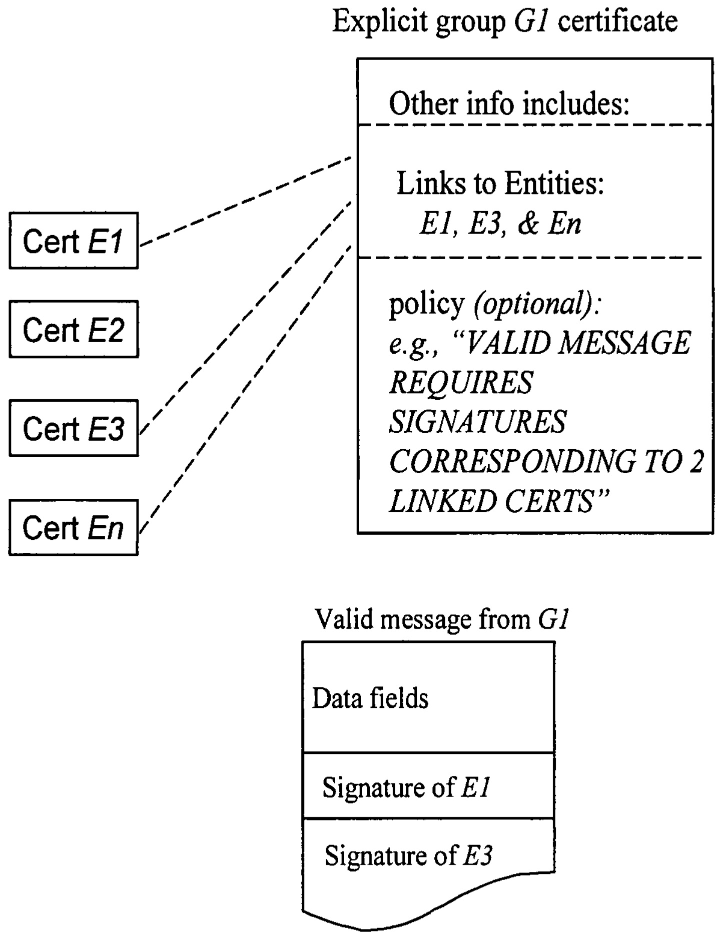
Explicit group G1 certificate
Other info includes:
Links to Entities:
E1, E3, & En
policy (optional):
e.g., "VALID MESSAGE REQUIRES SIGNATURES CORRESPONDING TO 2 LINKED CERTS"
Cert E1
Cert E2
Cert E3
Cert En
Valid message from G1
Data fields
Signature of E1
Signature of E3

Fig. 6

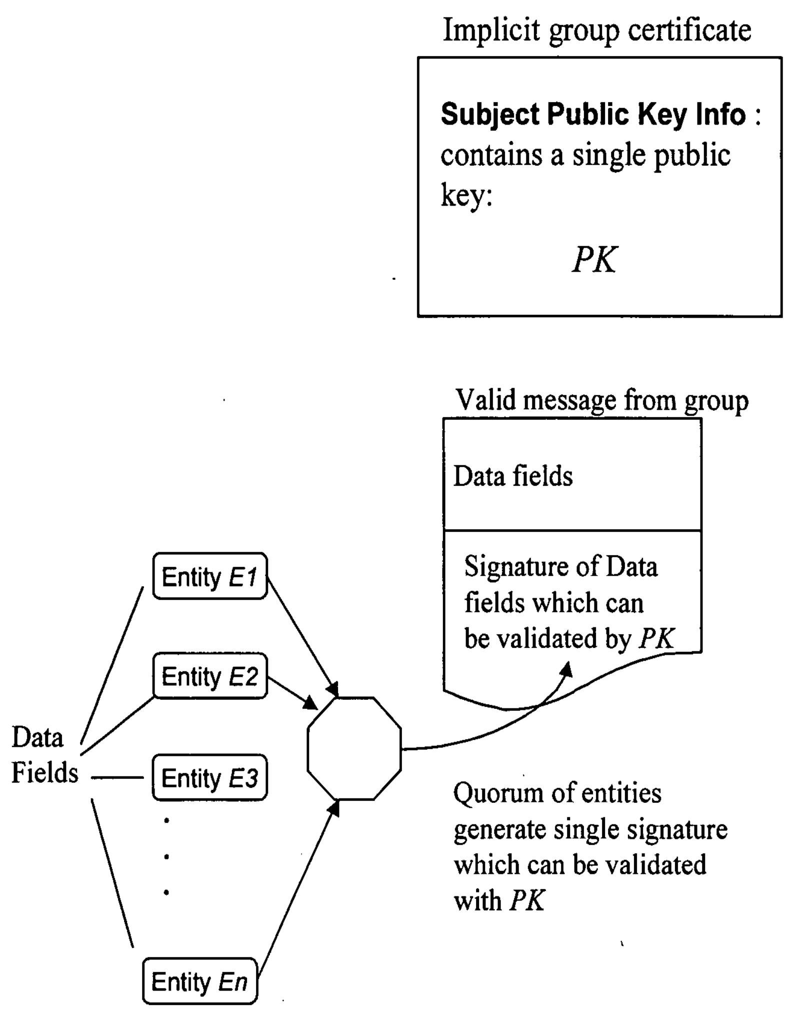
Implicit group certificate
Subject Public Key Info : contains a single public key:
PK
Valid message from group
Data fields
Signature of Data fields which can be validated by *PK*
Data Fields
Entity *E1*
Entity *E2*
Entity *E3*
Entity *En*
Quorum of entities generate single signature which can be validated with *PK*

Fig. 7